

CLAIMS

1. A gear tooth (1) provided with a concave root (2) joined at its origin to the root of the neighboring tooth, and with a top (3) joined to the said root (2) by a first transition point (4), characterized in that the top of the tooth is provided with two convex sectors (7, 8) joined by a second transition point (9) defining a discontinuity in curvature of the tooth profile.

2. A gear tooth according to claim 1, characterized in that the second transition point (9) defines the bottom of a notch made in the profile of the tooth (1).

3. A gear tooth according to claim 1 or 2, characterized in that the convex sector (7) following the first transition point (4) has a spherical involute profile.

4. A gear tooth according to claim 1, 2 or 3, characterized in that the convex sector (8) following the second transition point (9) has a spherical involute profile.

5. A gear tooth according to one of claims 1 to 4, characterized in that the top (2) of the tooth has a rounded end sector (11), joined to the second convex sector by a transition sector (12).

6. An external gear pump provided with at least one pair of mutually meshed toothed pinions, each tooth of which is in accordance with one of the preceding claims.

7. A gear pump according to claim 6, characterized in that the two toothed gears are identical.

8. A gear pump according to claim 6 or 7, characterized in that the first transition point (4) of one tooth rolls over the first convex sector (7) of a tooth of the opposite gear.

9. A gear pump according to claim 6, 7 or 8, characterized in that the shape of the end sector (11) of the teeth matches that of the concave sector defined by juxtaposition of two roots (2) of neighboring teeth.

10. A gear pump according to one of claims 5 to 9, characterized in that the end sector (11) of one tooth rolls between two teeth of the opposite gear, while maintaining contact therewith until it slips away from them.

11. A gear pump according to one of claims 5 to 10, characterized in that the teeth in mesh have at all times at least one primary bearing point and one secondary contact point, making it possible to ensure elimination of operational backlash and continuity of meshing.

12. A gear pump according to claim 11, characterized in that a given active point of one tooth is successively a primary bearing point and a secondary contact point in the course of meshing.

13. A gear pump according to one of claims 5 to 12, characterized in that the teeth of both gears are in contact over more than one pitch.